ABSTRACT OF THE DISCLOSURE

Disclosed is a device and method for compensating for phase distortions in a base station of an OFDMA-based cellular system. The method comprises receiving OFDM symbols from a plurality of mobile stations, canceling a symbol guard interval using a reference timing signal, and performing an FFT (fast Fourier transform) process on the OFDM symbols; dividing the OFDM symbols that have undergone FFT processing into subchannel groups of the mobile stations; restoring phases of the OFDM symbols divided into subchannel groups; and performing channel estimation and equalization on the restored OFDM symbols for each mobile station to thereby perform a demodulation process.